

Operating Instructions
for the
UNDERWOOD
BOOKKEEPING
MACHINE



UNDERWOOD TYPEWRITER COMPANY
General Offices: 342 MADISON AVENUE, NEW YORK, N. Y.

"Sales and Service Everywhere"

OPERATING INSTRUCTIONS
FOR THE
UNDERWOOD
BOOKKEEPING
MACHINE

Copyright 1929

UNDERWOOD TYPEWRITER COMPANY

General Offices: 342 Madison Ave. - New York, N. Y.

"Sales and Service Everywhere"

No effort has been made in this Operators' Instruction Book to describe the application of the machine to the many classes of office accounting.

The important parts of the Bookkeeping Machine have been illustrated, their purpose briefly outlined and their method of operation described. We believe that Bookkeeping Machine Operators will find this book very valuable for reference purposes, and that it will help them obtain a better understanding of the machine.

Remember that "Underwood Service" means the co-operation of our many branches with Underwood Bookkeeping Machine owners and operators.

These instructions were written on the presumption that the operator is familiar with the normal functions of a typewriter.

***Always Turn Off Electric Current
When Machine is Not in Use.***

SECTION I

Insertion of Paper

Speed in inserting and removing the paper is an important item in the day's work. By depressing the Feed Roll Release Lever (Plate 1, Figure 15) to its full depth, the paper feed rolls are relieved of their pressure against the Platen or Cylinder. The sheet of paper may then be inserted and pushed around the cylinder. After properly aligning the paper, return the Feed Roll Release Lever to its original position. Turn either cylinder knob until the writing is just above the top edge of Cylinder Scale. The printing point is directly behind the notch in the Type Bar Guide.

Depressing the Feed Roll Release Lever frees the paper from contact with the feed rolls and it can then be withdrawn easily.

It is improper to insert or remove paper by twirling the Cylinder Knobs, except for special work.

Numeral Keys

The bank of numeral keys is complete in itself, having all of the ten digits. The numeral 1 and 0 must be used at all times to write figures.

These keys have the normal typewriter action and uniform touch. For protection against faulty operation, they are locked while a Tabular Key or the Back Space Key is depressed and during the period when the actuating mechanism is operating. When one of these keys is depressed, all the other numeral keys are locked.

If, at any time, a numeral key remains depressed, it indicates that the key was not operated properly. To release, simply depress to its full depth. If the carriage has spaced, back space once and depress key fully.

Decimal Tabulator

A ten-key Decimal Tabulator (Plate 1, Figure 4) is located on the frame of the machine below the keyboard. Depressing the proper Tabular Key permits the Carriage to move instantly to any predetermined point on the writing line.

The operation of the Decimal Tabulator differs from the operation of the regular keyboard in that the Tabular Keys must be depressed full depth and held firmly until the Carriage has come to a full stop.

UNDERWOOD BOOKKEEPING MACHINE

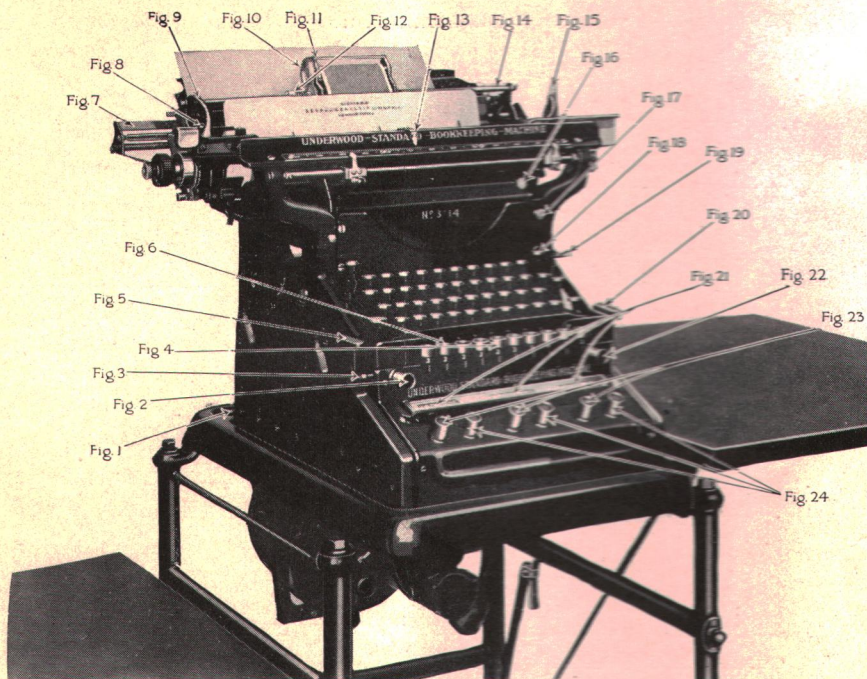


PLATE 1

The second key (from the left) is the **Decimal-Point or Column Selector Set Key** (Plate 1, Figure 6), from which all calculations must be made. After the Tabular Stops have been set, as explained in Section IV, a little practice is all that is necessary for one to become proficient in the art of operating this device.

SECTION II

Registers

The Registers (Plate 1, Figure 21) are located in the front of the machine, below the Tabular Keys, and show the totals of amounts accumulated or computed.

When an amount is being written no part of it is accumulated in the Register or Registers until the last figure has been written.

There are two kinds of Registers—Quantity and Money. Each kind shows two ways in which figures may be written and computed.

UNDERWOOD BOOKKEEPING MACHINE

It is possible to compute quantities in a Money Register by the use of a Whole Number Stop (see Section No. 3).

	<i>Register Wheels</i>	<i>Minimum spaces between stops</i>	<i>Minimum Width of Computing Columns</i>
<i>Money</i>	9 999 999 99	13	1-3/10 inch
<i>Registers</i>	999 999 99	11	1-1/10 "
	99 999 99	10	1 "
	9 999 99	9	0-9/10 "
	999 99	7	0-7/10 "
<i>Solid</i>	9999999 99	11	1-1/10 "
<i>Money</i>	999999 99	10	1 "
<i>Registers</i>	99999 99	9	0-9/10 "
	9999 99	8	0-8/10 "
	999 99	7	0-7/10 "
<i>Quantity</i>	999 999 999	12	1-2/10 "
<i>Registers</i>	99 999 999	11	1-1/10 "
	9 999 999	10	1 "
	999 999	8	0-8/10 "
	99 999	7	0-7/10 "
<i>Solid</i>	999999999	10	1 "
<i>Quantity</i>	99999999	9	0-9/10 "
<i>Registers</i>	9999999	8	0-8/10 "
	999999	7	0-7/10 "
	99999	6	0-6/10 "

It is always necessary to figure on this space for Register capacity. Where two or more Registers work in a column, space must be provided for the Register having the largest capacity.

The Standard Register contains nine wheels (9 999 999 99) with punctuation spaces between Dollars and Cents, between Hundreds and Thousands, and between Thousands and Millions.

The position of the Register on the machine determines its number.

On a One-Register machine the Register is located in the center and is known as Number Two.

On a Two-Register machine one Register is located at the left and is known as Number One; the other is located at the right and is known as Number Three.

UNDERWOOD BOOKKEEPING MACHINE

On a Three-Register machine the Register at the left is Number One, the one in the center is Number Two, and the one at the right is Number Three.

One-Register Machine

No. 2

Two-Register Machine

No. 1

No. 3

Three-Register Machine

No. 1

No. 2

No. 3

On machines having more than three Registers the numbers follow in rotation, left to right.

SECTION III

Tabular Stops

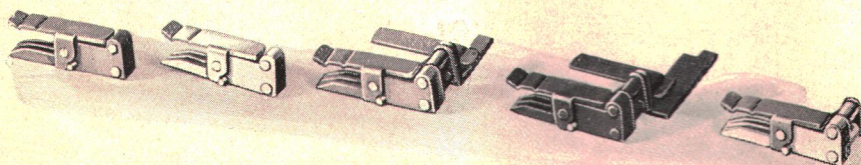


PLATE 2

Ordinary
Tabular Stop
(Copper)

Addition
Stop
(Nickel)

Red Subtraction
Stop
(Copper)

Black Subtraction
Stop
(Black)

Whole Number
Stop
(Copper and Nickel)

The use of stops, illustrated above, is as follows:

*Ordinary Tabular
Stop (Copper)*

For tabulating to Item, Folio, Order Number, Name, Address, Department, or other descriptive columns where no adding or subtracting is to be done.

*Addition Stop
(Nickel)*

For tabulating to any column or position where addition is required, such as Debit or Charge column and Old Balance column in Ledger Posting and Statement Writing, Amount column in Billing, etc.

UNDERWOOD BOOKKEEPING MACHINE

Red Subtraction Stop (Copper)

For tabulating to any column or position where Subtraction is required and the amount must be printed in red, such as Credit Column in Ledger Posting, and controls Indicator (Plate 1, Figure 16).

Black Subtraction Stop (Black)

For tabulating to any column or position where Subtraction is required and the amount must be printed in black, such as the Balance columns in Ledger Posting and Total Column in Billing, etc., and controls Indicator.

Whole Number Stop (Copper and Nickel)

For tabulating to any column or position where addition of quantities is required and it is not desirable to change the stock equipment of a Money Register to quantity. These Stops can be furnished in Add, Red Subtract and Black Subtract.

SECTION IV

To Set Tabular Stops

Ordinary Tabular Stop

1. Power must be shut off, switch lever forward (Plate 1, Figure 1).
2. Space Carriage to writing position.
3. Note number at Pointer on Front Scale. (Plate 1, Figure 13).
4. Place ordinary Tabular Stop (copper) in rear of Paper Table (Plate 4, Figure 1) and below Rear Scale so that the projection on the under side registers under corresponding number of Rear Scale.
5. Make Stop secure by pushing in as far as possible.

To Find Decimal Point Position of Computing Columns

1. In case of ruled columns space Carriage to bring vertical line, at RIGHT of column, to the printing point.
2. Space Carriage back three spaces with Back Space Key.
3. If columns are wide space back four spaces. (See table, Section II, governing width of columns and number of Register Wheels.)

UNDERWOOD BOOKKEEPING MACHINE

Addition Stop (Nickel)

Find decimal point position in column and set as directed for ordinary Tabular Stop.

Subtraction Stop (Copper or Black)

Find decimal point position in column and set the proper Stop as directed for ordinary Tabular Stop.

Whole Number Stop

Find decimal point position of whole number in the column and set Stop in that position as directed for ordinary Tabular Stop. This will make the amount register in the machine as soon as the unit figure is typewritten even though the register is a Money Register. Room must be allowed for the cents position although it is not used in whole number work.

Extreme care must be exercised in setting Stops for all computing columns. The Register capacity of the machine controls this operation. At least the minimum number of spaces as outlined in the table, referred to on Page No. 5, must separate Tabular Stops (decimal point positions).

A Red Subtraction Stop must never overlap the preceding Stop more than one space. A Black Subtraction Stop should never overlap the preceding Stop more than two spaces.

SECTION V

Column Selector Brackets

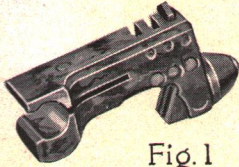
Column Selector Brackets (Plate 6, Figures 1, 2, 3) are the means through which the various wheels in the Registers are affected. They are located at the back of the machine, directly behind the Paper Table, in the same relative positions as their corresponding Registers, and are designated by the same number (Page 6).

UNDERWOOD BOOKKEEPING MACHINE

SECTION VI

Column Selectors

No. 1 Selector



No. 2 Selector



No. 3 Selector



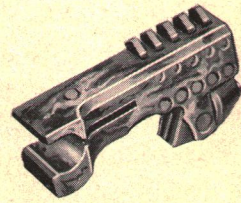
Fig. 1



No. 4 Selector



No. 5 Selector



Combination Selector

PLATE 3

Column Selectors are required for computing columns **ONLY**, are marked with number, and operate with the Register and Column Selector Bracket bearing a similar number.

A Number One Column Selector will not operate with a Register or Column Selector Bracket numbered Three, nor will a Number Three Selector operate with a Register or Column Selector Bracket numbered One.

Each Register requires a Column Selector for every column in which computation is to be shown by that Register (Plate 6).

SECTION VII

To Set Column Selectors

1. The power must be shut OFF, Switch Lever forward (Plate 1, Figure 1) and the Disconnect Lever over "ON" (Plate 1, Figure 19).
2. All the necessary Tabular Stops should be in place before any attempt is made to set Column Selectors.

UNDERWOOD BOOKKEEPING MACHINE

3. Tabulate to decimal point position in column in which it is desired to Add or Subtract, using Column Selector Set Key (Plate 1, Figure 6).
4. Tip Paper Table forward (Plate 4, Figure 1). Move the Latch

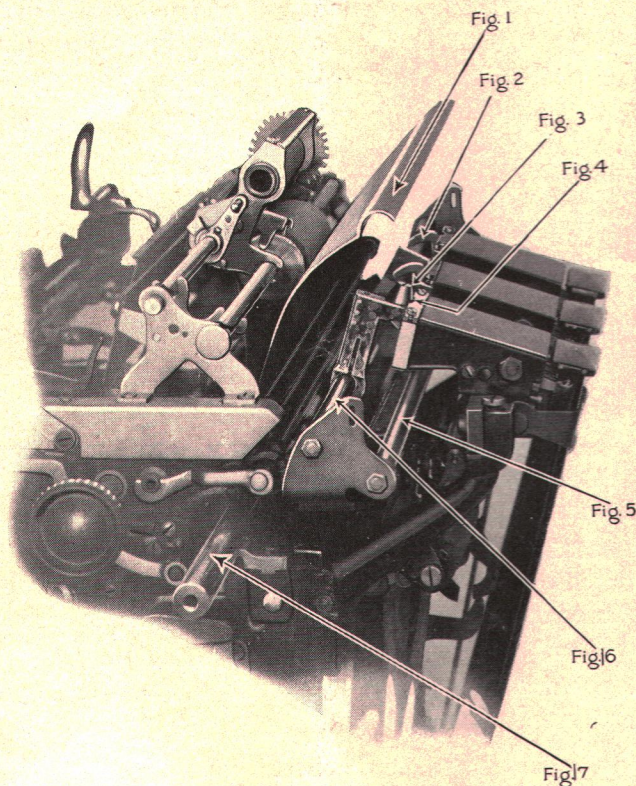


PLATE 4

on the right hand end of the Column Selector Guard Rail (Plate 1, Figure 7) to the left. Pull the Guard Rail to the right; tilt and slide it forward out of the Guard Rail Guides (Plate 4, Figure 2). (When replacing, reverse these operations.) Take proper Selector, hold in a vertical position so that the roll on upper end is to the rear (Plate 4, Figure 3) and slotted end is on the Selector Rack Bracket Rod (Plate 4, Figure 6).

UNDERWOOD BOOKKEEPING MACHINE

5. Let Selector rest against top of Column Selector Bracket so that the roll fits in the curved notch on the front edge of Bracket (Plate 4, Figure 4).
6. Move Carriage to the right to allow the Selector to drop from the Bracket to the rear Selector Rod (Plate 4, Figure 5).
7. Selector should drop easily into place; if necessary move slightly until it drops into position and engages with the teeth on the Selector Rod. **DO NOT FORCE IT.**
8. Replace the Column Selector Guard Rail (Plate 1, Figure 7), reversing the operations outlined in Number 4.
9. Switch on power and tabulate to decimal point position. If Selector has been correctly set, the mark on the top of it will align with the mark on front of Selector Bracket. The Numeral Keys should lock when in this position, when the power is on.

SECTION VIII

To Set Column Selectors for Computing Simultaneously in More Than One Register

1. Tabulate to decimal point position in column in which it is desired to Add or Subtract.
2. Set the proper numbered Selector for each Register in which the computation is to be made as instructed in Section VII. (Also see Plate 6.)
3. Move Carriage to the right to allow Selectors to drop from the Brackets to the rear Selector Rod.
4. Read Paragraphs 7, 8 and 9 in Section VII.
To test the proper setting of Selectors see instructions in Section IX.

SECTION IX

To Determine Proper Setting of Selectors

1. See that all Registers are clear.
2. Press Elimination Key in Register or Registers (Plate 1, Figure 23) and strike Motor Bar (Plate 1, Figure 20).

UNDERWOOD BOOKKEEPING MACHINE

3. Tabulate to the Tenths (\$10.00) position in the column for which one or more Selectors have been set.
4. Depress the Numeral One Key, strike the Motor Bar (Plate 1, Figure 20) and see what amount is added in the Register or Registers. If any amount other than Ten Dollars (\$10.00) is added, the Selector operating in the Register showing the wrong amount is incorrectly set and should be shifted as follows:

If the amount is more than Ten Dollars (\$10.00) move the Selector one or more spaces to the left; if the amount is less than Ten Dollars (\$10.00) move the Selector one or more spaces to the right.

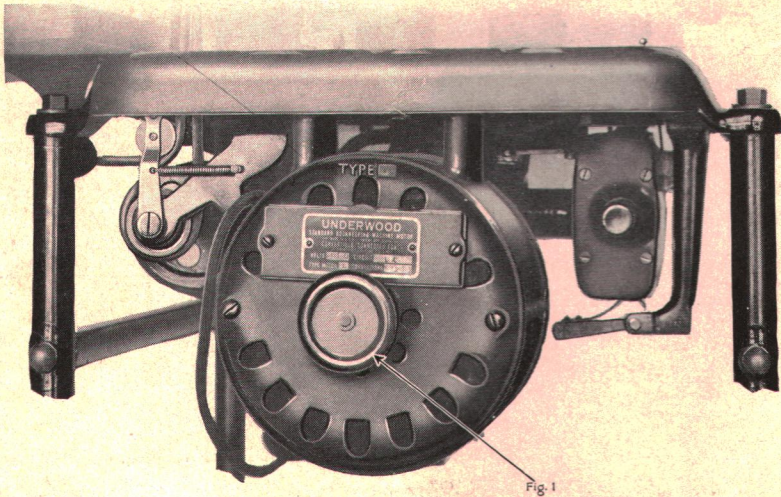


PLATE 5

SECTION X

Motor Bar

The Motor Bar (Plate 1, Figure 20) is used:

1. To release the Non-Add Lever (Plate 1, Figure 19).
2. To release the Subtraction Key (Plate 1, Figure 2).
3. To shift the Ribbon to black after using red.

UNDERWOOD BOOKKEEPING MACHINE

4. To unlock Numeral Keys after using Elimination Key (Plate 1, Figure 23).
5. To actuate the computing mechanism to determine proper setting of Selectors (see Section IX).

Carriage Return Bar

The Carriage Return Bar (Plate 1, Figure 5) is used to return the Carriage to the beginning of a new writing line, automatically spacing the paper one, two, or three lines, depending on the setting of the "Line-space Adjuster Lever" (Plate 1, Figure 8).

Automatic Carriage Return Marginal Stop

If it is desired to have the Carriage return automatically, set left hand Marginal Stop (Plate 6) one space beyond that occupied by the last character in the writing line. Upon writing the last character, the Carriage moves forward automatically one space, bringing the Pointer on the front of the Carriage in contact with the Marginal Stop. This trips the mechanism and causes the Carriage to be returned.

Note—Whenever the Carriage is returned to the beginning of a new line the Pointer rests against the right hand Marginal Stop. In this position the Platen or Cylinder can be turned forward but not backward. Move Carriage a few spaces to the left and the Platen can be turned freely in either direction.

Subtraction Key

The Subtraction Key (Plate 1, Figure 2) shifts the mechanism to Subtraction when pressed in. To return to Addition press the Motor Bar (Plate 1, Figure 20).

The usual ribbon equipment on an Underwood Bookkeeping Machine is a Bichrome Ribbon—black and red. The machine will always print in red when subtracting, except in a column set up with a black Subtraction Stop.

Subtraction Key Lock

The Subtraction Key Lock (Plate 1, Figure 3) is for the purpose of locking the machine in continuous subtraction. To operate, press in the Subtraction Key (Plate 1, Figure 2) with the thumb and at the same time push in the Subtraction Key Lock (Plate 1, Figure 3) with

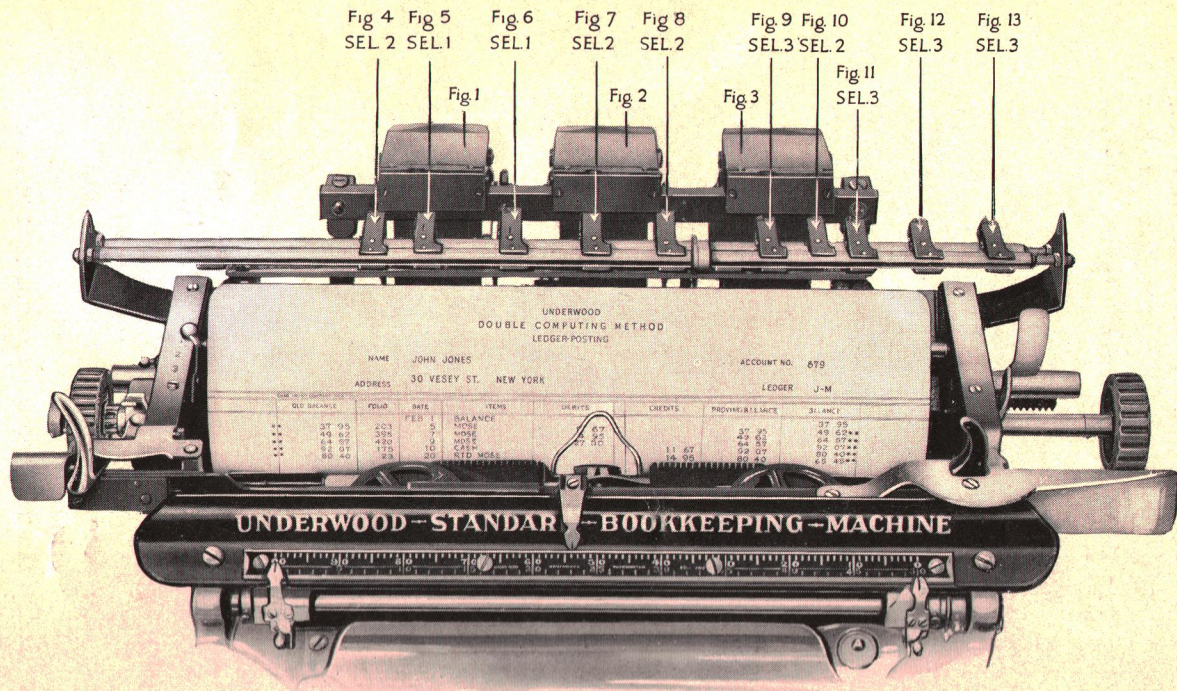


PLATE 6

This illustration shows the Paper Table and Continuous Proof Record attachment removed from the machine, so that the operation of the various Selectors in the Column Selector Brackets Nos. 1, 2 and 3 may be better seen and understood. The position of the Selectors controls, through the medium of the Selector Brackets, the adding and subtracting in the Registers.

Application of Selectors "set up" for the "Double Computing Method Form" shown in the machine, is as follows:

1. In Old Balance Column, Selector No. 2 (Fig. 4) operates under Selector Bracket No. 2.
2. In Debit Column, Selectors Nos. 1, 2 and 3, (Figs. 5, 7, and 9) operate under Selector Brackets Nos. 1, 2 and 3.
3. Automatic Subtraction throws the mechanism into Subtraction in red,

as form is carried to Credit Column; and Selectors Nos. 1, 2 and 3, (Figs. 6, 8 and 11) operate under Selector Brackets Nos. 1, 2 and 3.

4. Mechanism returns to Addition in Proving Balance Column and Selector No. 3, (Fig. 12) operates under Selector Bracket No. 3.
5. In Balance Column, Selectors Nos. 2 and 3, (Figs. 10 and 13) operate under Selector Brackets Nos. 2 and 3.

Results Obtained from "Double Computing Set Up." At the end of the run, Register No. 1 shows an accumulation of the Debits or Credits posted,—Debits and Credits to be posted at separate operations—while Registers Nos. 2 and 3 cross compute balances at separate operations on each account affected, as a check against errors in picking up Old Balances. They are automatically cleared as each posting is completed.

UNDERWOOD BOOKKEEPING MACHINE

the index finger, remove pressure from Subtraction Key, thus locking machine in Subtraction. A slight pressure on the Subtraction Key restores this Key to its normal position. Press Motor Bar to return to Addition.

Electric Switch

1. On the back of the stand top, left hand side (Plate 1, Figure 1) is an Electric Switch for the purpose of shutting off the current when leaving the machine. Pull Switch Lever forward for "OFF." Push Lever back for "ON."
2. If electric power fails, Motor Bar not tripping when pressed, ascertain whether the Motor is "stalled" by turning Motor Hand Wheel (Plate 5, Figure 1), revolving Motor Shaft in the direction indicated by the arrow. If shaft can be turned freely, the machine is not "tied up." Then investigate the power lines and Switch; if the failure of the machine to operate has been caused by lack of current, it will be necessary to clear up the trouble in the power lines.

If, on the other hand, the shaft will not turn easily, shut off the power by pulling forward the Switch Lever (Plate 1, Figure 1), and send for an Underwood Service Man.

Bichrome Ribbon Device

When it is desirable to write in red, in other than Adding or Subtracting zone, press Subtraction Key (Plate 1, Figure 2). To shift to black again, depress the Motor Bar (Plate 1, Figure 20).

Star Key

A Star Key (Plate 1, Figure 24) is placed directly below each Register. Depressing this Key will print a Star ONLY when the Register above it is clear (0 000 000 00).

The Star cannot be printed if the machine is in Subtraction, even though the Register is clear. Move to addition position and strike Motor Bar. Star can then be printed.

If the Star Key is pressed when the Motor is disconnected or power turned off the Star type-bar will not return to its normal position. DO NOT TRY TO PULL THE TYPE-BAR BACK. It will return to position when the current has been turned on.

It is customary in beginning vertical addition to print the Star in the Decimal Point position above the line of writing. After the total has been written and the Register cleared, the Star of the cleared Register should be printed immediately after the last figure. In cross column work print the Star in the column or margin space preceding the first item and immediately after the last figure in the line as soon as the Register is clear.

If, after writing a total shown in a Register, the Star Key cannot be depressed, it will be found that all the dial wheels in the Register do not stand at zero, indicating an error in transcription. To correct the error, read carefully "Correction of Errors," page 17.

Disconnect or Non-Add Lever

The Disconnect or Non-Add Lever (Plate 1, Figure 19) disconnects the computing mechanism when pulled forward.

To write figures (such as the figures of a Date, Folio Number, Bill Number, Order Number, Street Number, etc.) in adding or subtracting positions and not permit them to accumulate in the various Registers, the Disconnect or Non-Add Lever should be pulled forward before the writing starts. It is best, however, to avoid writing figures in these positions whenever possible.

This Lever will remain in the forward position, with mechanism disconnected, until the Motor Bar (Plate 1, Figure 20) or Star Key (Plate 1, Figure 24) is depressed, either of which will return the Lever to its normal position and reconnect the computing mechanism.

DO NOT FORGET to press the Motor Bar or print the Star when you have finished writing descriptive matter over adding columns.

Credit Balance Key

The Credit Balance Key (Plate 1, Figure 22) is used when writing Credit Balances in Accounts Receivable Ledgers and Statements.

As the Balance Column in Ledger Posting and Statement Writing is set for subtraction in black, the operation of this Key will change the-actuating mechanism to addition and shift the ribbon mechanism to red. When pressed in it should be held until the mechanism finishes its cycle.

Elimination Key

The Elimination Key (Plate 1, Figure 23) is pressed to correct errors before the last figure of an amount has been written. (If more than One-Register Machine, press all Elimination Keys.) Erase the incorrect figures, trip the Motor Bar (Plate 1, Figure 20) unlocking the Numeral Keys, and write the correct amount.

It is best to press all Elimination Keys to make inoperative any amount that has been partly written and not yet accumulated in the Registers, by some one fingering the Numeral Keys during the temporary absence of the operator. Then trip the Motor Bar (Plate 1, Figure 20) to unlock Numeral Keys.

Where a number of Registers are working together it is necessary in some instances to add or subtract in some and not in all. To do this, write the amount in the regular way but before writing the last figure in Units position depress and hold down the Space Bar, then strike the last figure in Units position. Press Elimination Key of the Register or Registers not to be affected and release Space Bar. The Motor will then cycle and the amount will appear in the Register or Registers where the Elimination Key or Keys have not been pressed.

Correction of Errors

(After amount has been accumulated into the Registers)

Addition

Return the Carriage and tabulate into position to rewrite the incorrect amount, push in the Subtraction Key (Plate 1, Fig. 2) and write the incorrect amount, which restores the original figures in the Registers. Then erase or mark "error" and write the correct amount.

Subtraction (Regular)

Return the Carriage and tabulate into position to rewrite the incorrect amount, add back this amount which restores the original amount in the Registers. Then erase or mark "error" and subtract the correct amount.

Subtraction (Automatic)

Return the Carriage and tabulate into position to rewrite the incorrect amount; press in the Credit Balance Key (Plate 1, Figure 22), then write the incorrect amount, which restores the original figures

UNDERWOOD BOOKKEEPING MACHINE

in the Registers. Return the Carriage and tabulate into position; erase or mark "error" as desired and write the correct amount.

To disconnect Automatic Subtraction, press the nickel plated button on rear of machine, right hand side, in and down. This button is directly back of Credit Balance Key (Plate 1, Figure 22). To release, raise the button.

Debit Balance

Return the Carriage and tabulate into position to rewrite the incorrect amount, push in Credit Balance Key (Plate 1, Fig. 22) and rewrite the incorrect amount, which restores the original figures in the Register. Return the Carriage and tabulate into position; erase or mark "error" as desired, and write the correct amount.

Credit Balance

Return the Carriage and tabulate into position to rewrite the incorrect amount. Write the incorrect amount, which restores the original figures in the Registers. Return the Carriage and tabulate into correct position. Press in Credit Balance Key and write correct amount.

Non-Print Key

The Non-Print Key (Plate 1, Figure 18) when depressed, prevents printing but does not prevent the accumulation of amounts in the Registers.

To set Non-Print Key, press firmly on front edge. To release, press firmly on rear edge.

NEVER use the Non-Print Key to correct errors in your daily work.

Sub-Totals

To print a sub-total in black, tabulate to position, pull the Non-Add or Disconnect Lever forward (Plate 1, Figure 19), copy total from Register and press Motor Bar (Plate 1, Figure 20) to reconnect adding mechanism.

To print a sub-total in red, pull the Non-Add or Disconnect Lever forward, press Subtraction Key and proceed to operate as above.

This operation does not affect the amount in the Register, which can be further added to or subtracted from, as desired.

Full Stroke Numeral Key Lock

If not depressed its full depth a Numeral Key will lock, will not return to position, and will not permit the other Numeral Keys to be used. To released the locked key, push it all the way down. Do not try to pull the Type-Bar back.

Type and Shift Keys

The standard type used on Underwood Bookkeeping Machines is Pica Gothic, ten impressions to the inch.

The Alphabet characters are Capitals and are written without the aid of Shift Keys. Other characters are written, some with, and some without, using the Shift Keys.

Continuous Proof Record (Tally Attachment)

To prepare the Continuous Proof Record (Tally Attachment) for operation, remove the rod (Plate 1, Figure 14) by twisting and raising it from the support brackets. Remove metal ends and old core from the rod and insert the metal ends in new roll. Break the seal, and unwind three or four inches of the Proof Record; then insert the spool and rod mechanism in the notches of the support brackets so that the filled spool is directly under the empty spool. Before dropping into the notches, see that the gray side of the carbon is facing the back of the machine.

Run the free end of the Proof Record under the carriage Cylinder—just as you would insert a sheet of paper. Bring up the Proof Record on the front side of the Cylinder; then thread the end in the slot of the empty spool and give the Spacing Lever (Plate 1, Figure 9) several strokes; this will cause the empty spool to revolve, winding up the end of the Proof Record and binding it securely; continue until any slack is taken up.

To remove the Proof Record, mark the last line of writing; disengage the gears (Plate 1, Figure 10) by pulling the clutch (Plate 1, Figure 12) to the left and turning it back, then unwind and pull the Proof Record through the upper spool (toward the rear of the machine) until the last line of writing is at least three inches above the Cutting Knife. Pull taut both the white paper and the carbon strip; this will remove any slack from both copies. Then engage the gears (Plate 1, Figure 10) by pushing back the handle (Plate 1, Figure 12).

UNDERWOOD BOOKKEEPING MACHINE

Give Line Spacing Lever several strokes to wind the paper securely around the empty spool. Tear off against the Knife (Plate 1, Figure 11) the used portion containing the entries. You are now ready to proceed with the next set of entries.

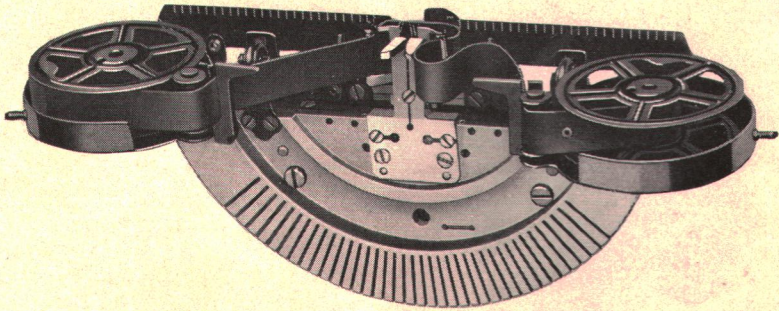


PLATE 7

Changing Ribbons

Move Carriage to central position. Wind Ribbon on one spool. Remove both spools from cups and carefully lift Ribbon from Ribbon Guide. Detach Ribbon from empty spool and fasten new Ribbon by means of hook. Wind Ribbon around the core of spool until the eyelet is covered.

Place the spools in the cup, being sure the ribbon winds on and off the spools from the front, as illustrated (Plate 7). The small pins in the bottom of the cups must enter the holes in the ribbon spool hubs. Pass the Ribbon through the openings in the side of the cups, in front of the rollers and through the slots in the reversing levers.

By drawing the handles on the cups forward the rollers and reversing levers are brought into an accessible position and the ribbon can be inserted easily.

Place the Ribbon back of the Ribbon Guide, then bring each side forward in front of the guide pins, making small loops in the Ribbon, similar to the letter S. It should then be lifted over the pins on each side and allowed to rest in the openings between the guide and pins.

Cleaning the Type

Remove Type-Bar Cover Plate by loosening thumb nut (Plate 1, Figure 17) one turn, slide Cover Plate to right as far as it will go, and pull forward on left end.

UNDERWOOD BOOKKEEPING MACHINE

The type are very accessible and should be kept clean at all times. Using a stiff brush, such as is furnished with the machine, with a forward motion, will remove all sediment in a few moments.

Oiling

The Way Rod (Plate 4, Figure 7), extending across the rear of machine on which the Carriage moves, and the Selector Rods (Plate 4, Figures 5 and 6) should not be allowed to get rusty. A touch of oil on the Selector Pawls (Plate 3, Figure 1), occasionally, will keep them working efficiently.

Don'ts

Do not change adjustments.

Do not oil any type bar bearings.

Do not allow anyone to repair or adjust the machine unless credentials from Underwood Typewriter Company are shown.

When moving the machine, do not push; always pull it.

If numeral type bar locks do not pull it back into place, depress key full depth.

Do not allow pins, paper clips, rubber bands, etc., to fall between the keys of the keyboard.

Do not leave machine uncovered at night.

TURN OFF ELECTRIC CURRENT WHEN THE DAY'S WORK IS FINISHED.

UNDERWOOD BOOKKEEPING MACHINE

The type are very accessible and should be kept clean at all times. Using a stiff brush, such as is furnished with the machine, with a forward motion, will remove all sediment in a few moments.

Oiling

The Way Rod (Plate 4, Figure 7), extending across the rear of machine on which the Carriage moves, and the Selector Rods (Plate 4, Figures 5 and 6) should not be allowed to get rusty. A touch of oil on the Selector Pawls (Plate 3, Figure 1), occasionally, will keep them working efficiently.

Don'ts

Do not change adjustments.

Do not oil any type bar bearings.

Do not allow anyone to repair or adjust the machine unless credentials from Underwood Typewriter Company are shown.

When moving the machine, do not push; always pull it.

If numeral type bar locks do not pull it back into place, depress key full depth.

Do not allow pins, paper clips, rubber bands, etc., to fall between the keys of the keyboard.

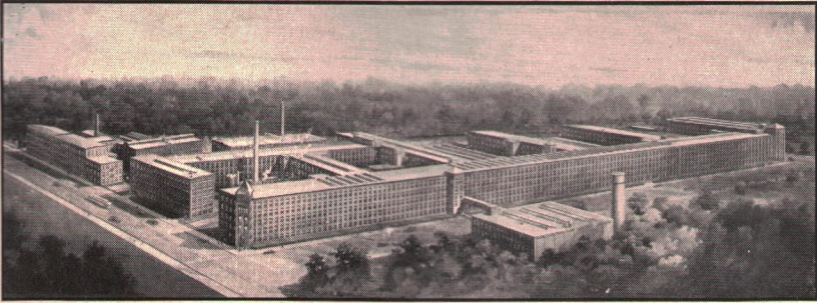
Do not leave machine uncovered at night.

TURN OFF ELECTRIC CURRENT WHEN THE DAY'S WORK IS FINISHED.

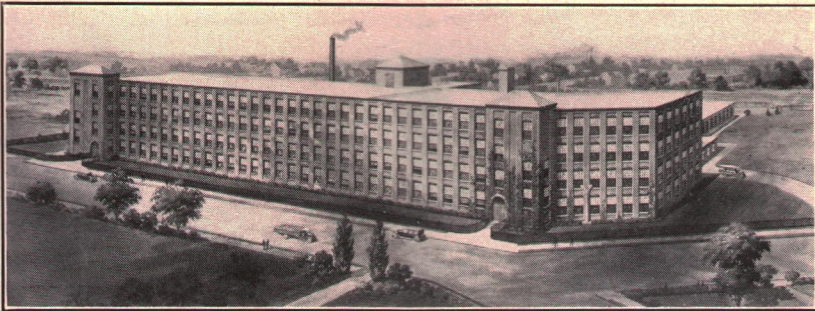
UNDERWOOD BOOKKEEPING MACHINE

INDEX

Bichrome Ribbon Device	15
Carriage Return Bar	13
Carriage Return (Automatic) Marginal Stop	13
Changing Ribbons	20
Cleaning Type	20
Column Selector Brackets	8
Column Selectors	9
Column Selectors (How to set)	9
Column Selectors (How to set for Computing in more than one register)	11
Column Selectors (To determine proper setting)	11
Continuous Proof Record	19
Correction of Errors (After amount has been accumulated)	17
Correction of Errors (Before amount has been accumulated, see Elimination Key)	17
Credit Balance Key	16
Decimal Tabulator	3
Disconnect or Non-Add Lever	16
Don'ts	21
Electric Switch	15
Elimination Key	17
Full Stroke Numeral Key Lock	19
Insertion of Paper	3
Motor Bar	12
Numeral Keys	3
Non-Print Key	18
Oiling	21
Registers	4
Service	24
Star Key	15
Subtraction Key	13
Subtraction Key Lock	13
Sub-Totals	18
Tabular Stops	6
Tabular Stops (How to set)	7
Type	19



*Underwood Standard Typewriter Works, Hartford, Conn.
The World's Largest Typewriter Factory*



*Underwood Computing Machine Works, Hartford, Conn.
The plant producing Underwood Bookkeeping Machines*

Underwood Mechanical Service

The Underwood Typewriter Company maintains for the protection of Underwood users a well organized Service Department with a total of over

1350 Trained Service Men
distributed among
245 Service Stations in U. S. A.

The policy of the Underwood Typewriter Company is to render prompt mechanical service wherever an Underwood used is located at the least cost consistent with good workmanship.

Only genuine Underwood parts are used.

The Underwood Typewriter Company services typewriters either under Maintenance Service Agreements (fixed annual fee) or at an hourly rate for labor plus the cost of parts.

Have your Underwood serviced by the manufacturer.

